

DESCRIPTIONS OF NEW FISHES FROM PANAMA.

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The following preliminary descriptions are of new fishes obtained by the authors during their first season's work on the Biological Survey of the Canal Zone, the ichthyological work of which is being conducted coöperatively by the Field Museum of Natural History and the Smithsonian Institution.

Astyanax grandis sp. nov.

Type No. 7571, F. M. N. H.; length 260 mm.; Rio Juan Diaz, Panama.

Head $4\frac{1}{5}$; depth $2\frac{1}{2}$; D. 9; A. 24; scales 38.

Body compressed; mouth moderate, the maxillary reaching past front of orbit, its length $2\frac{1}{2}$ in head; eye 3; snout 4; suborbital 3; no teeth on maxillary; base of anal $3\frac{1}{2}$ in body; longest dorsal ray $3\frac{3}{8}$; pectorals equal length of head; origin of dorsal nearer tip of snout than base of caudal.

Color olivaceous, silvery; an indistinct silvery band; one or two black humeral spots; no caudal spot; fins all plain.

Taken only in Pacific Coast streams.

Hemigrammus minutus sp. nov.

Type No. 7572, F. M. N. H.; length 75 mm.; Rio Agua Clara, C. Z., Panama.

Head $3\frac{2}{5}$; depth $2\frac{2}{5}$; D. 10; A. 22; scales 36.

Body compressed, dorsal and ventral outlines about evenly convex; mouth small, the maxillary reaching to near middle of the eye, its length $2\frac{1}{3}$ in head; eye $2\frac{1}{2}$ in head; snout $3\frac{1}{2}$; suborbital 4 in head; dorsal fin pointed, its first rays $3\frac{1}{3}$ in body; base of anal $3\frac{1}{4}$.

Color olivaceous, silvery; a faint silvery lateral band; one or two faint humeral spots; no caudal spot; fins all plain.

Taken in a few streams in Canal Zone on the Atlantic side of the Isthmus.

Deuterodon atracaudata sp. nov.

Type No. 7573, F. M. N. H.; length 114 mm.; Rio Frijoles, C. Z., Panama.

Head 4; depth 3; D. 8; A. 27; scales 36.

Body rather elongate, much compressed, ventral region rounded; mouth small, the lower jaw scarcely included; maxillary reaching slightly past anterior margin of orbit, $2\frac{1}{3}$ in head; eye small, $2\frac{1}{3}$ in head; snout $3\frac{1}{4}$ in head; dorsal over anterior part of anal, its origin nearer base of caudal than head; base of anal $3\frac{1}{4}$ in body.

Color olivaceous, silvery, a faint silvery band; a humeral spot; black caudal spot extending on outer rays of caudal fin; other fins plain.

Creagrutus notropoides sp. nov.

Type No. 7574, F. M. N. H.; length 143 mm.; Rio Indio, Panama.

Head 4; depth 4; D. 9; A. 14; scales 35.

Body robust, little compressed, in general form and appearance much like *Notropus blennioides*; snout blunt; mouth small, the lower jaw included; eye rather large, $2\frac{1}{2}$ in head; snout $3\frac{3}{4}$; dorsal fin over ventrals, its origin nearer tip of snout than base of caudal; pectorals $4\frac{2}{3}$ in body, their tips reaching base of ventrals; tips of ventrals reaching anal; lateral line not quite complete.

Color olivaceous, sides with a narrow silvery band; a black humeral spot; no caudal spot; fins all plain.

Taken in swift water in the upper Chagres and tributaries.

Eleotris latifasciatus sp. nov.

Type No. 7575, F. M. N. H.; length 160 mm.; Rio Cardenas, Panama.

Head $3\frac{2}{3}$; depth $3\frac{5}{8}$; D. V, 9; A. 10; scales 37.

Body robust, not much compressed; profile evenly convex; top of head flat; interorbital 3 in head; mouth small, maxillary scarcely reaching past anterior margin of orbit; teeth in bands, none canine-like; eye $3\frac{1}{2}$ in head; snout $4\frac{1}{2}$; cheeks and opercles scaly; dorsal spines flexible, longest about $\frac{1}{3}$ length of head; ventrals separate, their tips nearly to origin of anal; pectorals broad, of 13 rays, about 4 scales between dorsals; caudal rounded, its length equals length of head.

Color dark olivaceous, sides with a black lateral band; its width about equals diameter of eye; a light band of nearly same width above this; base of caudal rays with an oblong black blotch; fins nearly plain.

A few specimens taken in fresh water streams on the Pacific slope of the Isthmus near Panama City.